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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
DALENCOURT, YVES	
ART UNIT	**PAPER NUMBER**
2157	

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/875,192	JEFFERY ET AL.	
	Examiner	Art Unit	
	Yves Dalencourt	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 June 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) *31-45* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 June 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This office action is responsive to communication filed on 06/07/01.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

Group I. Claims 1 - 30, drawn to a diplex communications network exchanging data packets with a plurality of subscriber stations, classified in class 709, subclass 203.

Group II. Claims 31 - 45, drawn to a diplex communications network exchanging data packets with a plurality of subscriber stations along subscriber transmission lines, a communication card comprising a plurality of modems, each modem for processing a carrier at a selected frequency separated from frequencies of other carriers generated by other modems in the communications card, classified in class 714, subclass 724.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because using a communication card

which comprises a plurality of modems, where each one is for processing a carrier at a selected frequency separated from frequencies of other carriers generated by other modems in the communication card is not need for exchanging data packets in a diplex communications network. The subcombination has separate utility such as in determining an optimal frequency allocation of a DSL chip.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Mark B. Eisen on 11/08/04 a provisional election was made without traverse to prosecute the invention of Group I, claims 1 - 30. Affirmation of this election must be made by applicant in replying to this Office action. Claims 31 – 45 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim

remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Drawings

8. The boxes in figures 1 and 3 need to be labeled as required under 37 CFR 1.83(a).

Specification

9. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Therefore, the abstract is too long; it should be limited to 150 words.

Claim Objections

10. Claim 7 is objected to because of the following informalities: It is suggested to define " HPNA " in the claim as -- Home Phoneline Networking Alliance (HPNA) --.

Claim 12 is objected to because of the following informalities: It is suggested to delete " claim 1 "(line 1) and insert -- claim 11 --. Appropriate correction is required.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3 - 5, 9 – 11, 13 - 15, 19 - 21, 23 - 25, and 29 - 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Russell W. Bell (US 6,678,721; hereinafter Bell).

Regarding claims 1, 4, 9, 11, 14, 19, 24, and 29, Bell discloses a system and method for establishing a point-to-multipoint DSL network (fig. 2), which comprises a communication port for connection to the network (col. 3, lines 3 – 6 and 45 – 47; Bell discloses a single DSL connection with a WAN, from within a LAN), a modem having an address, coupled to the communications port (col. 6, lines 59 – 67; Bell discloses a DSL communications popular line codes, which includes a QUAM referred to herein as a network modem), a processor coupled to the modem, for processing data packet having identifier information relating the data packets to the address (144, fig. 2; col. 6, lines 16 – 23; Bell discloses a CPU or DSP 144 that is configured to perform the primary processing tasks of the circuit 110), the processor further comprising a master communications interface mode in which the communications interface serves as a master communications interface for downloading data packets from the network and

uploading data packets to the network (206, fig. 3; col. 3, lines 17 – 44; col. 5, lines 6 – 17; col. 6, lines 1 – 15; col. 7, lines 2 – 31; Bell discloses a computer (112) that is configured to assume the role of master, where it establishes communication link with a WAN, and directs all WAN communications over the WAN, using a WAN frequency and protocol (such as DSL); and relays all WAN communications from other computers (114 &116) connected in parallel in the network to the WAN), and a slave communications interface mode in which the communications interface serves as a slave communications interface for downloading data packets from the network and uploading data packets to the master communications interface (212, fig. 3; col. 3, lines 17 – 44; col. 5, lines 6 – 17; col. 6, lines 1 – 15; col. 7, lines 2 – 31; Bell discloses that as other computers join the LAN, then WAN communications from those computers are relayed through the master to the WAN), and a supplementary communications link, for communicating with one or more other communications interfaces (see abstract; col. 6, lines 16 – 23; Bell discloses a line driver circuitry 142 for interfacing with the telephone line), wherein when a plurality of communications interfaces (see computer #1 through computer #n, fig. 2) are connected in parallel one of the plurality of communications interfaces is in master mode and the others of the plurality of communications interfaces are in slave mode, the communications interfaces switching between master mode and slave mode responsive to a priority queue of upload demands from the plurality of communications interfaces (col. 3, lines 17 – 44; col. 5, lines 6 – 17; col. 8, lines 5 – 67; Bell discloses that upon power-up, the first computer configures itself as a " master "

while subsequently powered up computers configure themselves as " slave " computers).

12. Regarding claims 3, 13, Bell teaches that the supplementary communications link comprises twisted pair telephone wiring within a premises (col. 1, lines 33 – 35; col. 5, lines 61 – 67; Bell discloses that the frequency band denoted by reference numerals 125 and 131 extends from approximately DC to approximately 4kHz and carries the voice band signals (also referred to as POST band which uses twisted pair cabling for sending transmissions to customer premises).

13. Regarding claims 5, 15, Bell teaches that the processor is remotely configurable (144, fig. 2; col. 6, lines 16 – 23).

14. Regarding claims 10, 20, Bell teaches a communications interface, wherein when switching from master mode to slave mode the priority queue is transferred from the communications interface to another communications interface (col. 3, lines 17 – 38).

15. Regarding claims 21 Bell discloses a method of communicating over a diplex communications network exchanging data packets over a subscriber line with communications interfaces at a plurality of subscriber stations (fig. 2), comprising the steps of: for each communications interface, assigning an address to a modem coupled to a communications port of each communications interface (col. 2, lines 39 – 42; col. 6, lines 59 – 67; Bell discloses a DSL communications popular line codes, which includes a QUAM referred to herein as a network modem), routing to each respective communications interface data packets downloaded from the network having identifier information relating the data packets to the address (col. 2, lines 42 – 51; Bell discloses

that computer 12 may be the only computer configured with an IP address , and the remaining computers 14, 16, and 18 may be identified by sub-IP addresses), in a master communications interface mode, uploading data packets to the network over the subscriber line (206, fig. 3; col. 3, lines 17 – 44; col. 5, lines 6 – 17; col. 6, lines 1 – 15; col. 7, lines 2 – 31; Bell discloses a computer (112) that is configured to assume the role of master, where it establishes communication link with a WAN, and directs all WAN communications over the WAN, using a WAN frequency and protocol (such as DSL); and relays all WAN communications from other computers (114 &116) connected in parallel in the network to the WAN), and in a slave communications interface mode, uploading data packets to a master communications interface over a supplementary communications link (212, fig. 3; col. 3, lines 17 – 44; col. 5, lines 6 – 17; col. 6, lines 1 – 23; col. 7, lines 2 – 31; Bell discloses that as other computers join the LAN, then WAN communications from those computers are relayed through the master to the WAN), wherein when a plurality of communications interfaces are connected in parallel one of the plurality of communications interfaces is in master mode and the others of the plurality of communications interfaces are in slave mode, the communications interfaces switching between master mode and slave mode responsive to a priority queue of upload demands from the plurality of communications interfaces (col. 3, lines 17 – 44; col. 5, lines 6 – 17; col. 8, lines 5 – 67; Bell discloses that upon power-up, the first computer configures itself as a " master " while subsequently powered up computers configure themselves as " slave " computers).

16. Regarding claim 23, Bell teaches a method, wherein the supplementary communications link comprises twisted pair telephone wiring within a premises (col. 1, lines 33 – 35; col. 5, lines 61 – 67; Bell discloses that the frequency band denoted by reference numerals 125 and 131 extends from approximately DC to approximately 4kHz and carries the voice band signals (also referred to as POST band which uses twisted pair cabling for sending transmissions to customer premises).

17. Regarding claim 25, Bell teaches that the processor is remotely configurable (144, fig. 2; col. 6, lines 16 – 23).

18. Regarding claim 30, Bell teaches a communications interface, wherein when switching from master mode to slave mode the priority queue is transferred from the communications interface to another communications interface (col. 3, lines 17 – 38).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

20. Claims 2, 12, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell W. Bell (US 6,678,721; hereinafter Bell).

Regarding claims 2, 12, and 22, Bell teaches a memory 146, that may include both RAM and ROM, and dispose in communication with the DSP or CPU 144 (col. 6, lines 24 – 26), but fails to specifically teach that such memory stores data during switching intervals.

However, one skilled in the art recognizes that in order for Bell's device to switch between master mode or slave mode (see col. 3, lines 24 – 26), all WAN communications have to be stored in order to prevent loss of information during the transition.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that the WAN communications have to be stored in the RAM of memory 146 while switching from master to slave mode for the purpose of preventing loss of information during such transition.

21. Claims 6 – 8, 16 – 18, and 26 - 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell W. Bell (US 6,678,721; hereinafter Bell) in view of John Wai Tsang Eng (US 2003/0035442; hereinafter Eng).

Regarding claims 6 – 8, 16 – 18, and 26 – 28, Bell teaches all the limitations in claim 1, but fails to specifically teach that the supplementary communication link

communicates using Ethernet (claim 6); the supplementary communication link comprises an HPNA card (claim 7); and wherein the modem is frequency agile (claim 9).

However, Eng teaches, in the same field of endeavor, a full-service broadband cable modem system, which uses a communication link such as Ethernet, HPNA, and a frequency agile digital up converter (claimed frequency agile modem) (fig. 1; paras. 0041, 0057, and 0058).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bell's device by using a communication link such as Ethernet, HPNA, and a frequency agile digital up converter (modem) as evidenced by Eng for the purpose of allowing a highly efficient and scalable access method that can be used to deliver simultaneously interactive digital video, telephony and high speed internet access by large number of users.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Holloway et al (US 2004/0196857) discloses a synchronized transport across non-synchronous networks.

Ting Sun (US 6,778,646) discloses a system and method for coupling multiple home networks.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yves Dalencourt whose telephone number is (571) 272-3998. The examiner can normally be reached on M-TH 7:30AM - 6: 00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Yves Dalencourt
Y. D
November 19, 2004

SALEH NAJJAR
PRIMARY EXAMINER